

AD-A076 554

NAVAL HEALTH RESEARCH CENTER SAN DIEGO CA
POPULATION DIFFERENCES AND CORRELATES OF POST-TREATMENT EFFECT--ETC(U)
JUL 78 D KOLB , E K GUNDERSON , P COBEN

UNCLASSIFIED

NAVHLTHRSCHC-78-48

F/G 6/5

NL

| OF |
AD A
076554

END
DATE
FILMED
82
DTIC

ADA 076554

LEVEL 6
B.S.
**POPULATION DIFFERENCES AND CORRELATES OF
POST-TREATMENT EFFECTIVENESS IN ALCOHOL
REHABILITATION FACILITIES.**

⑨ Interim rept.)

⑪ Jul 78

⑩ Douglas
D. KOLB

E. K. E. GUNDERSON

Patricia COBEN

⑫ 39

DDC

REF ID: A64116
NOV 14 1978
RECORDED

⑭ NAVHNRSCHC-

REPORT NO. 78-48

⑯ M0096PN

⑰ M0096PN001

DDC FILE COPY



This document has been approved
for public release and sale; its
distribution is unlimited.

NAVAL HEALTH RESEARCH CENTER

P. O. BOX 85122
SAN DIEGO, CALIFORNIA 92138

NAVAL MEDICAL RESEARCH AND DEVELOPMENT COMMAND

BETHESDA, MARYLAND

391642

79 13 11 086

6

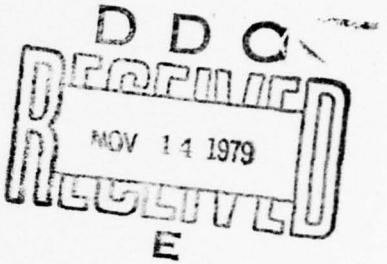
Population Differences and Correlates of Post-Treatment

Effectiveness in Alcohol Rehabilitation Facilities

Douglas Kolb, E. K. Eric Gunderson,

and

Patricia Coben



Report Number 78-48

Research supported by the Bureau of Naval Personnel under Project Order
Number N0002278F088AFZ and the Naval Medical Research and Development Command,
Department of the Navy, under Research Work Unit M0096-PN.001-1034.

The views presented in this paper are those of the authors.

No endorsement by the Department of the Navy

has been given nor should be inferred.

This document has been approved
for public release and sale; its
distribution is unlimited.

SUMMARY

PROBLEM: The U.S. Navy provides treatment for alcoholism in three types of facilities. Alcohol Rehabilitation Centers (ARC) and Alcohol Rehabilitation Services (ARS) provide approximately 6 weeks of residential treatment. Services, formerly called Units, are located in medical facilities. Alcohol Rehabilitation Drydocks (ARD) provide outpatient counseling services and, in some instances, short-term residential treatment. Upon completion of rehabilitation most participants return to normal duty assignments and complete their obligated tours of Navy service successfully. Failure to control alcohol abuse problems is costly to the individual and to the Navy because of the absenteeism, morbidity, reduced proficiency, and premature attrition that results. Residential treatment is expensive, however, and should only be offered when the likelihood of benefit is reasonably good. The social and psychological characteristics of participants may be important factors in determining appropriate program content and program effectiveness. An evaluation of population characteristics and differences in relation to post-treatment outcomes is a necessary first step toward meaningful comparisons of rehabilitation programs in terms of success or failure of treatment.

OBJECTIVE: A major purpose of this study is to compare characteristics of the populations treated at the three types of rehabilitation facilities, determine differences in post-treatment outcome, and relate population differences to differences in post-treatment outcome. A second objective was to examine the consistency of predictors of post-treatment outcome among types of facilities and among individual facilities. Consistency in predictive validities would tend to support the proposition that population characteristics generally are important in determining program effectiveness (success or failure rates) and that program differences are of less importance in determining rehabilitation results.

APPROACH: Participants were 4,908 Navy enlisted men admitted to Alcohol Rehabilitation Centers, Services, and Drydocks during the period from late 1974 through early 1977. The population was divided into a younger group (age 25 or younger) and an older group (age 26 or older). Data were extracted from the DARTS computerized system which includes extensive biographical and service history information as well as psychological testing (Comrey Personality Scales) gathered on all individuals admitted to alcohol rehabilitation facilities. Analyses were conducted for younger and older populations separately to determine differences among types of facilities on all biographical and service history characteristics. Post-treatment effectiveness also was determined for each subgroup. Effectiveness was defined as active duty status or receipt of a favorable discharge with no recommendation against reenlistment 180 days or more following completion of treatment. Regres-

sion equations predicting post-treatment effectiveness were derived for younger and older groups separately treated at Centers, and these equations were used to predict post-treatment effectiveness at other types of facilities and at individual facilities of all types.

RESULTS: The overall effectiveness rate for younger men was 59%. Differences among the three types of facilities in outcome for younger men were significant with Centers having the lowest effectiveness rate (54%), Services somewhat higher (58%), and Drydocks the highest (63%). At the same time Center participants had the most severe disciplinary histories and Drydock participants the least severe. Within types of facilities, that is, among the four individual Centers, nine Services, and seven Drydocks studied, differences in post-treatment effectiveness were not significant for younger participants.

Effective outcome for younger men was best predicted by pay grade at the time of admission to rehabilitation. Other items that increased prediction were satisfaction with job specialty, negative history of family alcoholism, and fewer times "on report" or less time spent in the brig. The predictive equation developed on Centers participants only predicted effectiveness not only for all four Centers but for seven of the nine Services and seven individual Drydocks as well.

The overall effectiveness rate for older men was considerably higher (8%) than that for younger men. Effectiveness rates for the three types of facilities were 86% and 87% for Centers and Services, respectively, and 91% for Drydocks. Differences in outcome between Drydocks and the other two types of facilities were significant for older men. Again, disciplinary and alcohol abuse histories of men treated in Centers and Services were more severe than those of men treated in Drydocks. For older participants, differences in post-treatment effectiveness were not significant among the four individual Centers or the nine individual Services. Among the seven Drydocks, however, one had a significantly lower effectiveness rate than the others; this Drydock also reported a much higher incidence of drinking during rehabilitation than other Drydocks.

Pay grade at the time of admission to rehabilitation was the best predictor of post-treatment effectiveness for older men. Additional predictive items were: stating that the Navy was a career, low number of high school suspensions, and high coffee consumption. Prediction equation values correlated significantly with post-treatment effectiveness for the four Centers, eight of the nine individual services, and five of the seven Drydocks.

CONCLUSIONS: Differences in post-treatment outcome among the three types of facilities were related to characteristics of the participants at the time of admission. Post-treatment differences among individual facilities within type generally were not significant suggesting basic similarity in the effects of rehabilitation programs of the same type.

Prediction equations for the two age groups were similar, and pay grade was the most important predictor of post-treatment outcome for both groups. Furthermore, for both younger and older populations, there was remarkable stability or generality of results when the prediction equations were applied to other types of rehabilitation facilities and to individual facilities.

The results overall lend support to the conclusion that rehabilitation programs within type of facility tend to be homogeneous in their effects.

RECOMMENDATIONS:

1. Referral to specific type of facility was partially based upon severity of alcohol abuse problems in the present study, that is, more severe cases were referred to Centers and Services and less severe to Drydocks. Clearer diagnostic criteria should be developed to enhance differential referral based upon the severity of alcohol problems and to increase the homogeneity of participants within type of facility.
2. Evaluations of post-treatment effectiveness should be extended to include information on drinking behavior and associated problems after treatment.
3. Population characteristics of the various rehabilitation facilities should be continuously monitored to detect changes that might affect rehabilitation effectiveness.

Accession For	
NTIS	GRANT
DDC TAB	<input checked="" type="checkbox"/>
Unnumbered	<input type="checkbox"/>
Justification	
By _____	
Classification	
Availability Codes	
Dist	General or Special

A

INTRODUCTION

Background

Previous studies have detailed the characteristics of Navy enlisted men admitted to alcohol rehabilitation facilities and have identified predictors of post-treatment outcome (1-3). In subsequent years overall rehabilitation services have been expanded both in the number of Alcohol Rehabilitation Services (formerly called Units) which are located in medical facilities, and the number of Alcohol Rehabilitation Drydocks. Drydocks offer outpatient counseling, but many also provide inpatient services for a 2-week period with outpatient follow-up.

The Navy's alcohol treatment programs rely heavily on the Alcoholics Anonymous (AA) approach. Attendance at AA meetings is mandatory and presentation of AA philosophy is incorporated in the day-to-day programs. Other therapeutic modalities include group therapy. Antabuse is administered regularly to program participants. Rehabilitation staffs may include civilian and military personnel, both recovered alcoholics and nonalcoholics. The Navy operates a counselor training program for its staff personnel so that a common understanding of individuals with alcohol problems and a common philosophy of treatment pervade all facilities.

Objective

The purposes of the present study are: (1) to examine population differences among the three types of rehabilitation facilities--Centers, Services, and Drydocks; (2) to determine differences in post-treatment outcome; (3) to relate population differences to differences in outcome, and (4) to identify correlates of post-treatment effectiveness at each type of facility.

METHOD

Sample

Participants were 4,908 active duty Navy enlisted men admitted to Alcohol Rehabilitation Centers, Services, and Drydocks during the period from late 1974 through early 1977. The population was divided into younger participants, age 25 and younger (45%), and older participants, age 26 and older (55%). This division essentially separated career-oriented sailors from others. The population of younger men was distributed among the three types of facilities as follows: Centers - 31%, Services - 27%, and Drydocks - 42%. For older men the distribution was: Centers - 44%, Services - 26%, and Drydocks - 30%. Four Centers, nine Services, and seven Drydocks were included in the study.

Procedure

On admission to rehabilitation participants completed a battery of tests including a 112-item

biographical questionnaire. Items pertained to pre-service school and community adjustment; family history, including alcohol problems; service history; health history; alcohol use, and alcohol-related problems. At the end of treatment, staff assessments were obtained on items pertaining to drinking during treatment and prognosis for post-treatment adjustment. Post-rehabilitation status was determined from Bureau of Naval Personnel records, and participants were classified as effective or noneffective. Effectiveness was defined as active duty status or receipt of a favorable discharge from service with no recommendation against reenlistment at least six months following completion of rehabilitation. Noneffective status was the receipt of an unfavorable discharge from service more than 30 days after rehabilitation or a negative recommendation for reenlistment at the time of discharge.

Analyses were conducted on all biographical items for the younger and older populations separately in order to determine differences among the three types of facilities in these characteristics. Post-rehabilitation effectiveness also was determined for each subgroup.

Five special variables were created from questionnaire responses. These were labeled: (1) Alcoholic by Behavioral Criteria; (2) Family Alcohol History; (3) Sociopathy; (4) Earliest Age for Major Alcohol Problem, and (5) Socioeconomic Status. The derivation of these variables is described in Appendix A.

Correlations were computed between all biographical items and the effectiveness criterion for younger and older men separately at Centers. Items that correlated significantly ($p < .01$) with the criterion were entered into regression analyses for each subgroup. The equations derived were then used to compute predicted effectiveness scores for individual rehabilitation facilities, and these scores were correlated with actual post-rehabilitation effectiveness status.

RESULTS

Significant differences among the three types of facilities on biographical items are shown separately for younger and older populations in Appendix B, Tables 1 and 2. The younger populations at the three types of facilities did not differ on age, pay grade, or length of service. Younger men assigned to Centers had more severe disciplinary records than men at Services or Drydocks as evidenced by numbers of times on report, captain's masts, courts-martial, times in the brig, and demotions (Appendix B, Table 1). They also were more often absent without leave and disciplined because of drinking than men at other facilities. However, men at Drydocks were more likely to report a current disciplinary problem, that is, pending at the time of referral to rehabilitation, than men at Centers or Services. For all of these items, except discipline pending, there were linear trends with the Centers' population having the highest rates and Drydocks the

the lowest. Because of these problems related to alcohol, the Centers' group obtained a higher mean score on the derived variable Alcoholic by Behavioral Criteria than the other groups.

Younger men treated at Services differed from those treated at Centers and Drydocks in more often reporting physical or health problems. They not only reported more hospital admissions specifically for drinking but more hospitalizations for all reasons. Larger percentages of younger Services' participants reported being advised by a physician to stop drinking or indicated having physical reactions to alcohol abuse--"shakes," blackouts, severe hangovers, vomiting blood, and/or hallucinations. This group also reported family histories of alcoholism more often than the other groups.

The overall effectiveness rate for younger men was 59%. Differences in outcome among facilities were significant ($\chi^2(2) = 14.22$, $p < .01$). The percentages of younger participants meeting the effectiveness criterion were: Centers - 54%, Services - 58%, and Drydocks - 63%.

Among the four individual Centers, nine Services, and seven Drydocks, differences in post-rehabilitation effectiveness were not significant.

Although differences in age and years of service were significant among types of facilities for older personnel, the magnitudes of these differences were small; for example, the mean age for Centers was 33.1 years; for Services, 32.4 years, and for Drydocks, 32.0 years. Differences in pay grade were not significant.

Older men treated at Centers reported higher rates of "being put on report," captain's masts, and reduction in pay grade than men treated at Services and Drydocks. They also reported more arrests for felonies committed since age 16 and more time spent in civilian jails. For most of these disciplinary items, the Drydock population reported the lowest incidence.

Men treated at Services indicated being hospitalized because of drinking and missing work because of drinking more often than men in the other groups. They reported higher frequencies of specific symptoms resulting from alcohol abuse--"shakes," blackouts, and hallucinations. However, men at Services reported less often than men at Centers that they had seen a doctor or other professional person to help stop drinking or that a doctor had said they had liver problems or pancreatitis. For all of these items the Drydock population had lowest frequencies and fewer met the behavioral criteria for alcoholism than the Centers' or Services' populations.

The overall post-rehabilitation effectiveness rate for older men was 89%. Rates were significantly different for populations at the three types of facilities ($\chi^2(2) = 7.95$, $p < .05$). Effectiveness rates were: Centers - 86%, Services - 87%, and Drydocks - 91%. The differences between Drydocks and Centers and Services were significant, but the difference between Centers and Services

was not.

Among the four individual Centers and the nine Services, differences in post-rehabilitation effectiveness were not significant. Among the seven Drydocks, however, one had an effectiveness rate of only 78% while the others ranged between 89% and 96% ($\chi^2(6) = 22.90$, $p < .01$). It was noteworthy that the Drydock with the lowest effectiveness rate had a much higher proportion of participants reported by the treatment staff to be drinking during rehabilitation than other Drydocks (68% versus 26% or less).

A step-wise multiple regression equation predicting post-rehabilitation effectiveness was derived for all younger men treated at Centers. The results are shown in Table 1. Seven variables entered the equation yielding a multiple correlation of .437. The variable making the greatest contribution to predicting effectiveness was pay grade, that is, the higher the pay grade, the more likely the outcome met the criterion of effectiveness. Effectiveness was further associated with expressing satisfaction with one's occupational specialty, less frequent sick call visits during the year preceding admission to rehabilitation, fewer times on disciplinary report, fewer times in the brig since entering service, more often experiencing seasickness (probably reflecting more time at sea), and less often having a family history of alcoholism.

Table 1
Prediction Equation for Noneffectiveness
for Young Alcohol Rehabilitees*

Variables	r	Beta Weight	t	
Pay Grade	-.361	-.282	-7.477	
Family Alcohol History	.132	.107	3.030	
Satisfaction with Job	-.200	-.119	-3.223	R = .437
Times Seasick	-.109	-.121	-3.406	df = 7, 658
Times on Report	.181	.098	2.671	F = 22.241
Sick Call Visits	.118	.083	2.317	
Times in the Brig	.144	.074	2.043	

*Variables are listed in the order in which they entered the equation.

The regression equation results derived for the older population treated at Centers are shown in Table 2. Four variables entered the equation yielding a multiple correlation of .462. Pay grade again made the greatest contribution to the prediction equation, that is, men who had

Table 2
Prediction Equation for Noneffectiveness
for Older Alcohol Rehabilitees*

<u>Variables</u>	<u>r</u>	<u>Beta Weight</u>	<u>t</u>	
Pay Grade	-.435	-.363	11.732	R = .462
Navy as a Career	.301	.136	4.454	df = 4, 1024
Number of Cups of Coffee per Day	-.129	-.068	- 2.400	F = 69.538
Number of School Suspensions (Pre-service)	.093	.062	2.223	

*Variables are listed in the order in which they entered the equation

Table 3
Correlations of Prediction Equations with
Criterion for Individual Facilities

<u>Rehabilitation Facility</u>	<u>Young Men</u>		<u>Older Men</u>	
	<u>N</u>	<u>r</u>	<u>N</u>	<u>r</u>
Center A	127	.396	218	.404
Center B	209	.410	303	.426
Center C	234	.515	365	.475
Center D	96	.371	142	.586
All Services (formerly Units)	582	.365	689	.442
Service A	66	.418	65	.629
Service B	38	.495	72	.439
Service C	63	.469	70	.251*
Service D	41	ns	54	.321*
Service E	60	.412	52	.423
Service F	77	.304	101	.551
Service G	45	ns	43	.495
Service H	70	.407	63	.489
Service I	42	.482	60	ns
All Drydocks	894	.346	756	.300
Drydock A	113	.365	75	.377
Drydock B	61	.326*	55	.328*
Drydock C	48	.414	45	.587
Drydock D	81	.405	58	ns
Drydock E	50	.437	62	.498
Drydock F	115	.340	133	.247
Drydock G	61	.552	47	ns

*p < .05; all others p < .01.

achieved higher pay grades at the time of their admission were more likely to effectively complete their service obligations following alcohol rehabilitation. Further, men who indicated that they

considered naval service a career, who reported fewer suspensions during school years, and who consumed many cups of coffee per day were more effective.

As shown in Table 3, the derived equations for younger and older participants were applied to prediction of outcome at individual Centers, Services, and Drydocks. The predicted values correlated significantly with actual post-rehabilitation effectiveness at all four Centers, all seven Drydocks, and seven of the nine Services for the younger population. For the older population, correlations based upon the prediction equation were significant for all Centers, eight of the Services, and five of the Drydocks. Thus, there was remarkable stability or generality in the predictors of effectiveness over individual facilities for both younger and older populations. Pay grade was the most consistent predictor in that it correlated significantly with outcome for younger groups at all individual facilities where the equation predicted significantly and for all older groups except at one facility.

DISCUSSION

The overall effectiveness rates for both older men (88%) and younger men (5%) treated in Navy alcohol rehabilitation facilities during the period of the current study compared favorably with rates reported for an earlier time period, i.e., 89% and 55%, respectively (3). The increase in effectiveness rate for the younger population probably reflects the fact that larger numbers of younger men with less severe alcohol problems were referred to Drydocks for treatment during the more recent time period. A large proportion of the younger men treated in Drydocks were not alcoholic by the behavioral criteria used in the present study.

The differences in outcome for younger men among the three types of facilities--Centers, Services, and Drydocks--appeared to reflect characteristics of the populations rather than differences in programs. Men from Centers had the least favorable disciplinary histories as reflected in times on report, numbers of demotions, and captain's masts and had the lowest effectiveness rate. Men treated in Services had less severe disciplinary records and somewhat more favorable outcomes. Drydock program participants had least severe disciplinary records and most favorable outcomes. The failure to find significant differences in effectiveness rates among facilities within major types tended to support the contention that outcome was related to population differences in military and social history rather than to differences in types or qualities of programs offered.

Among older men, differences in outcome were significant only for men seen in Drydocks as opposed to those seen in both Centers and Services. Here, too, more severe disciplinary histories were characteristic of the Center population which had the lowest effectiveness rate.

The association between increased physical symptomatology due to alcohol abuse and referral to a Service is explained by the fact that Services are located within large medical facilities and are likely to receive referrals directly from other medical services. This association was present for both the younger and older populations.

The equations predicting favorable outcome for the two age groups were similar. For both groups pay grade made major contributions to the equations. Men who had advanced in pay grade despite difficulties with alcohol abuse were most likely to perform satisfactorily in the Navy following rehabilitation and to receive favorable discharges and recommendations for reenlistment at the completion of their obligated service. For both groups a positive orientation toward the Navy was predictive of favorable outcome. For the younger man this was expressed by satisfaction with his job specialty; for the older man it was stating the service was his career. Other variables contributed to the equation for younger men including disciplinary and health indicators. For older men an item related to pre-service history, number of school suspensions, contributed to the prediction equation. This item previously had demonstrated value in predicting successful military adjustment for first-term enlistees (4); all of the older men in this study were beyond their first enlistments.

An association between coffee consumption and favorable outcome for older men suggested that positively motivated individuals may have compensated for abstention from alcohol by drinking more coffee. Anecdotally, coffee drinking is part of the Navy way of life and consumption of large quantities not unusual for senior Navy personnel.

The outcome criterion of the present study, overall performance effectiveness, was not based upon post-treatment adjustment alone but also reflected pre-treatment service history. A more complete analysis is needed of pre-treatment and post-treatment disciplinary records, promotions and demotions, and other performance indicators to demonstrate the specific effects of alcohol rehabilitation programs on quality of performance. A second limitation of the present study was the absence of specific data on drinking behavior after treatment. Thus, it is not known to what extent drinking patterns per se were modified by the treatment experience.

REFERENCES

1. Kolb, D. & Gunderson, E. K. E. Prognostic indicators for Navy alcoholics in Rehabilitation Centers and Units (Report No. 75-16). San Diego, Calif.: Naval Health Research Center, 1975.
2. Kolb, D., Gunderson, E. K. E., & Bucky, S. Effectiveness of treatment for Navy enlisted men in Alcohol Rehabilitation Centers and Units (Report No. 75-37). San Diego, Calif.: Naval Health Research Center, 1975.
3. Kolb, D., Pugh, W. M., & Gunderson, E. K. E. Prediction of post-treatment effectiveness in Navy alcoholics. Journal of Studies on Alcohol, 1978, 39, 192-196.
4. Plag, J. A. & Goffman, J. M. The prediction of four-year military effectiveness from characteristics of naval recruits. Military Medicine, 1966, 131, 729-735.

APPENDIX A

Derivation of Special Variables

1. Alcoholic by Behavioral Criteria

A scale of behavioral problems related to alcoholism was determined by responses to nine questions contained in the biographical questionnaire. A man received a score of 1 for each positive response when asked if, because of drinking, he had been demoted, separated from his spouse, told by his doctor he had pancreatitis, told by his doctor he had a liver problem, or had had convulsions; he received a score of 1 for any three positive responses to four additional questions indicating he had been absent without leave (AWOL), had an auto accident, had disciplinary action because of drinking, or had been arrested for drunk driving. The positive responses were summed to create an alcoholism problems score with a possible range of 0 to 6.

2. Family Alcohol History

Family alcohol history was obtained from responses to questions asking how many close relatives (real parents, full brothers, full sisters) had how many of the following problems because of their own drinking: marital separation or divorce; laid off from work or fired; two or more drunk driving arrests; two or more arrests for public intoxication, drunk and disorderly conduct, etc., and physician said that alcohol had harmed their health. The possible range of scores was 0 to 60.

3. Sociopathy

The sociopathy score was derived from responses to six questions. A subject received a score of 1 for each yes response to two questions: Had he been suspended or expelled from school and had he run away from home prior to age 15. He was scored 1 for a yes response to either, but not both, of two questions: Did he have a police or arrest record prior to age 16 and was he ever placed in a reform school. He was scored 1 for a yes response to either, but not both, of two additional questions: Had he wandered from place to place for more than three months and had he used an alias. The possible range of scores was 0 to 4.

4. Earliest Age Major Problem Due to Alcohol

The earliest age an individual had a major problem because of alcohol was determined by his responses to five questions. First, the earliest age at which an individual had had all three of the following problems was recorded: absent without leave, auto accident, and picked up for drunk driving. This age was compared with the age he had been demoted and the age he had been separated or divorced. The earliest age was selected. The range was 1 to 7 representing ages grouped from 17 or younger to 28 or over.

5. Socioeconomic Status

Socioeconomic status was based on years of schooling reported for the subject's father, years of schooling reported for his mother, and the father's occupation. Values for years of schooling were assigned as follows: ≤ 9 years = 0, 10 or 11 = 1, and ≥ 12 years = 2. Values for father's occupation were assigned: unskilled, unemployed, other = 0; skilled/semiskilled, farming, forestry, service = 1, and professional, managerial, clerical, sales = 2. Values were summed for a range of 0 to 6.

Biographical Questionnaire Variables that Discriminated
among Younger Men Treated in
Alcohol Centers, Services, and Drydocks

<u>Items</u>	<u>Centers</u>	<u>Services</u>	<u>Drydocks</u>	<u>Chi Square</u>	<u>Total N</u>
HAVE YOU EVER BEEN REDUCED IN RANK OR PAY GRADE?				26.73	2,195
A. No	63.6	70.1	75.3	df = 4, p < .001	
B. Yes, only once	26.9	23.4	18.4		
C. Yes, 2 or more times	9.5	6.5	6.3		
TO WHAT COMMAND WERE YOU ATTACHED WHEN YOU WERE ADMITTED TO THE ALCOHOL PROGRAM THIS TIME?				26.15	2,186
A. Ship	58.4	54.1	48.5	df = 4, p < .001	
B. Shore	27.0	35.5	37.8		
C. Squadron	14.6	10.4	13.6		
IF YOUR NAVY SPECIALTY IS NOT LISTED, PLEASE ANSWER (J = Other)				46.99	2,197
A. BM	14.4	12.0	9.5	df = 18, p < .001	
B. HM	4.6	8.5	2.8		
C. RM	3.4	3.5	2.8		
D. CS	4.0	3.3	3.9		
E. EN	3.3	3.2	3.3		
F. YN	1.1	1.5	1.0		
G. BT	6.4	5.8	4.9		
H. SK	1.8	1.2	1.1		
I. MM	7.9	7.0	7.7		
J. Other	53.0	54.1	63.2		
HOW SATISFIED ARE YOU WITH YOUR SPECIALTY?				22.21	2,192
A. I'm very dissatisfied	19.9	17.0	15.5	df = 10, p < .05	
B. I'm somewhat dissatisfied	14.8	15.0	12.8		
C. I don't care about it either one way or another -					
I'm indifferent	7.5	6.0	6.9		
D. I'm satisfied	25.8	26.5	29.2		
E. I'm very satisfied	23.8	24.7	21.7		
F. I don't know	8.2	10.8	14.0		
HOW MANY TIMES DURING THE PAST YEAR WERE YOU <u>ON THE SICK LIST OR HOSPITALIZED?</u>				16.27	2,199
A. None	50.1	45.2	54.9	df = 4, p < .01	
B. One time	25.9	29.0	25.9		
C. Two times or more	24.0	25.8	19.3		
HOW MANY DAYS (TOTAL) WERE YOU ON THE SICK LIST OR HOSPITALIZED DURING THE PAST YEAR?				29.02	2,200
A. No days	49.0	44.5	54.3	df = 16, p < .05	
B. 1 to 2 days	15.5	18.8	16.3		
C. 3 to 5 days	10.3	11.5	9.6		
D. 6 to 10 days	7.8	7.7	6.6		
E. 11 to 15 days	3.7	3.5	3.8		
F. 16 to 25 days	4.2	3.5	3.3		
G. 26 to 35 days	2.4	3.0	2.5		
H. 36 to 45 days	1.5	2.8	1.3		
I. 46 or more days	5.7	4.7	2.5		
SINCE YOU HAVE BEEN IN THE SERVICE, HOW MANY TIMES HAVE YOU:					
<u>BEEN PUT ON REPORT?</u>				61.38	2,197
A. Never	13.8	17.9	18.8	df = 16, p < .001	
B. Once	12.7	16.6	21.8		
C. Twice	14.4	16.9	15.6		
D. 3 times	14.8	13.7	11.9		
E. 4 times	10.5	8.8	10.2		
F. 5 times	9.2	8.3	5.9		
G. 6 times	5.7	5.3	4.6		
H. 7 times	2.9	1.7	3.1		
I. 8 times or more	16.0	10.9	8.1		

SINCE YOU HAVE BEEN IN THE SERVICE, HOW MANY TIMES HAVE YOU:	<u>Centers</u>	<u>Services</u>	<u>Drydocks</u>	Chi Square	Total N
<u>HAD A CAPTAIN'S MAST?</u>				49.64	2,201
A. Never	24.3	34.3	37.4	df = 6, p < .001	
B. Once	24.0	23.3	25.6		
C. 2 or 3 times	31.6	27.7	26.4		
D. 4 to 8 times or more	20.0	14.7	10.6		
<u>BEEN COURT-MARTIALED?</u>				7.07	2,205
A. Never	90.2	91.9	93.8	df = 2, p < .05	
B. 1 or more times	9.8	8.1	6.2		
<u>SPENT TIME IN THE BRIG?</u>				14.02	2,205
A. Never	82.1	85.9	88.7	df = 2, p < .001	
B. 1 or more times	17.9	14.1	11.3		
DO YOU HAVE A CIVILIAN POLICE OR ARREST RECORD FOR ANY MISDEMEANOR (OTHER THAN A TRAFFIC TICKET) SINCE AGE 16?				9.80	2,199
A. No	50.4	58.2	57.1	df = 2, p < .01	
B. For one incident or more	49.6	41.8	42.9		
WERE YOU EVER PLACED IN A REFORM SCHOOL?				6.79	2,197
A. Yes	13.9	13.6	10.1	df = 2, p < .05	
B. No	86.1	86.4	89.9		
WHAT IS THE LONGEST TIME YOU'VE EVER SPENT IN A CIVILIAN JAIL?				24.39	2,205
A. Never	28.5	34.1	35.0	df = 8, p < .01	
B. Less than 24 hours	33.1	34.1	36.0		
C. 1 to 3 days	18.2	18.2	16.5		
D. 4 to 7 days	8.6	5.3	5.1		
E. 8 days or more	11.6	8.3	7.5		
HAVE YOU EVER WANDERED ABOUT FROM PLACE TO PLACE <u>FOR MORE THAN THREE MONTHS</u> WITH NO JOB?				10.80	2,202
A. No	82.2	74.8	77.6	df = 2, p < .01	
B. 1 or more times	17.8	25.2	22.4		
ARE THERE ANY DISCIPLINARY ACTIONS PENDING AGAINST YOU AT THIS TIME?				15.92	2,189
A. Yes	19.9	22.8	28.3	df = 2, p < .001	
B. No	80.1	77.2	71.7		
HOW MANY TIMES HAVE YOU BEEN MARRIED (INCLUDING PRESENT MARRIAGE)?				10.56	2,197
A. Never	69.0	69.8	74.0	df = 4, p < .05	
B. Once	28.8	28.4	22.9		
C. 2 or more times	2.2	1.8	3.0		
HOW MANY CLOSE RELATIVES (PARENTS, FULL BROTHERS OR FULL SISTERS) HAVE EVER SEEN A PSYCHIATRIST, PSYCHOLOGIST, OR OTHER MENTAL HEALTH WORKER FOR A NERVOUS OR MENTAL PROBLEM?				6.27	2,186
A. None	74.1	70.6	76.3	df = 2, p < .05	
B. 1 or more close relatives	25.9	29.4	23.7		

THE FOLLOWING IS A LIST OF PROBLEMS THAT PEOPLE MIGHT HAVE BECAUSE OF THEIR OWN DRINKING:

	<u>Centers</u>	<u>Services</u>	<u>Drydocks</u>	<u>Chi Square</u>	<u>Total N</u>
--	----------------	-----------------	-----------------	-------------------	----------------

MARITAL SEPARATION OR DIVORCE
LAID OFF FROM WORK OR FIRED
TWO OR MORE DRUNK DRIVING ARRESTS
TWO OR MORE ARRESTS FOR PUBLIC INTOXICATION, DRUNK AND DISORDERLY CONDUCT, ETC.
PHYSICIAN SAID THAT ALCOHOL HAD HARMED THEIR HEALTH

HOW MANY OF YOUR CLOSE RELATIVES (REAL PARENTS, FULL BROTHERS OR FULL SISTERS) HAVE HAD ONLY FOUR OF THOSE TYPES OF PROBLEMS?

A. None	87.3	89.2	91.7	8.29	2,181
B. 1 or more close relatives	12.7	10.8	8.3		

HOW MANY OF YOUR CLOSE RELATIVES (REAL PARENTS, FULL BROTHERS OR FULL SISTERS) HAVE HAD ONLY THREE OF THOSE TYPES OF PROBLEMS?

A. None	86.1	83.4	88.6	8.17	2,184
B. 1 or more close relatives	13.9	16.6	11.4		

HOW OLD WERE YOU THE FIRST TIME ANY OF THE FOLLOWING PROBLEMS OCCURRED BECAUSE OF ALCOHOL?

WERE DEMOTED BECAUSE OF DRINKING. 38.18 2,190

A. Never	69.1	77.3	80.9	df = 12, p < .001,
B. 17 or younger	3.7	2.8	2.0	expected frequency
C. 18 to 19	11.2	8.5	7.5	< 5
D. 20 to 21	9.1	6.2	5.9	
E. 22 to 23	4.2	2.8	2.9	
F. 24 to 25	2.4	2.3	.6	
G. 26 to 27	.3	0	.2	
H. 28 or more	0	0	0	

WENT AWOL BECAUSE OF DRINKING. 31.70 2,191

A. Never	62.6	67.1	73.0	df = 12, p < .01,
B. 17 or younger	2.2	2.3	2.7	expected frequency
C. 18 to 19	13.5	12.8	8.4	< 5
D. 20 to 21	11.7	8.8	9.6	
E. 22 to 23	6.1	6.2	4.0	
F. 24 to 25	3.6	2.8	2.4	
G. 26 to 27	.3	0	0	
H. 28 or more	0	0	0	

HAD DISCIPLINARY ACTION, CAPTAIN'S MAST, OR COURT-MARTIAL BECAUSE OF DRINKING. 59.49 2,192

A. Never	34.3	44.0	51.4	df = 14, p < .001,
B. 17 or younger	4.9	2.8	3.3	expected frequency
C. 18 to 19	22.5	22.3	19.2	< 5
D. 20 to 21	20.5	15.2	15.9	
E. 22 to 23	11.8	11.2	6.6	
F. 24 to 25	5.7	4.3	3.5	
G. 26 to 27	.2	.2	.1	
H. 28 or more	.2	0	0	

HAD TO GO INTO THE HOSPITAL BECAUSE OF DRINKING. 254.81 2,192

A. Never	69.4	49.0	85.7	df = 14, p < .001,
B. 17 or younger	3.4	4.3	2.1	expected frequency
C. 18 to 19	8.2	11.8	4.0	< 5
D. 20 to 21	9.3	14.3	5.0	
E. 22 to 23	5.7	12.3	1.8	
F. 24 to 25	4.0	7.7	1.4	
G. 26 to 27	0	.3	0	
H. 28 or more	0	.2	0	

	<u>Centers</u>	<u>Services</u>	<u>Drydocks</u>	<u>Chi Square</u>	Total <u>N</u>
HOW OLD WERE YOU THE FIRST TIME ANY OF THE FOLLOWING PROBLEMS OCCURRED BECAUSE OF ALCOHOL?					
A DOCTOR TOLD YOU TO STOP DRINKING.				61.30	2,192
A. Never	73.7	67.7	83.0		
B. 17 or younger	2.5	3.5	2.3	df = 14, p < .001, expected frequency < 5	
C. 18 to 19	9.1	9.5	5.2		
D. 20 to 21	6.9	8.3	5.1		
E. 22 to 23	4.3	3.7	2.6		
F. 24 to 25	3.4	0	1.6		
G. 26 to 27	0	0	.2		
H. 28 or over	0	.2	0		
HOW MANY YEARS DO YOU THINK YOU HAVE HAD A DRINKING PROBLEM?				44.84	2,190
A. Never	12.7	7.2	15.3		
B. 1 year or less	16.9	18.7	21.9	df = 10, p < .001	
C. 1 to 2 years	22.9	25.5	25.1		
D. 3 to 5 years	31.4	35.3	27.4		
E. 6 to 10 years	14.7	12.5	9.3		
F. 11 years or more	1.5	.8	1.0		
WHAT IS THE LONGEST PERIOD OF TIME YOU HAVE PARTICIPATED IN ALCOHOLICS ANONYMOUS?				116.73	2,188
A. Never	37.6	48.5	62.0		
B. 1 month or less	42.7	40.5	30.9	df = 6, p < .001	
C. 2 to 3 months	15.0	7.8	4.8		
D. 4 months or more	4.8	3.2	2.4		
WHAT IS THE LONGEST TIME YOU HAVE STAYED ON THE WAGON (ABSTAINED) SINCE YOU BEGAN HAVING PROBLEMS WITH ALCOHOL?				42.43	2,184
A. Never	19.4	23.6	27.5		
B. 1 month or less	41.7	46.5	47.3	df = 6, p < .001	
C. 2 to 3 months	29.5	20.7	16.9		
D. 4 months or more	9.4	9.2	8.3		
USING THE APPROPRIATE NUMBER BELOW, PLEASE ANSWER THE FOLLOWING QUESTION.*					
A. No					
B. Once					
C. 2 or 3 times					
D. 4 or 5 times					
E. 6 or 7 times					
F. 8 or 9 times					
G. 10 to 15 times					
H. 16 times or more					
SHAKES THE "MORNING AFTER"?				17.24	2,190
No	37.1	30.8	40.3		
1-3 times	22.0	23.0	22.9	df = 6, p < .01	
4-15 times	18.0	20.0	16.3		
16 times or more	22.9	26.3	20.5		
HALLUCINATIONS?				23.01	2,187
No	78.8	70.5	80.7		
≥ Once	21.2	29.5	19.3	df = 2, p < .001	
VOMITING BLOOD?				6.60	2,192
No	80.4	78.7	83.7		
≥ Once	19.6	21.3	16.3	df = 2, p < .05	
BLACKOUTS - CAN'T REMEMBER WHAT YOU DID WHILE DRINKING?				46.61	2,184
No	15.1	8.3	14.7		
Once	6.9	6.2	9.2	df = 14, p < .001	
2-3 times	16.6	17.2	18.8		
4-5 times	12.4	12.0	12.6		
6-7 times	8.2	7.7	8.7		
8-9 times	6.3	7.4	7.5		
10-15 times	8.8	7.4	7.7		
16 times or more	25.7	33.8	20.9		

*Responses were grouped based on frequency distribution. 4

USING THE APPROPRIATE NUMBER BELOW, PLEASE ANSWER THE FOLLOWING QUESTION.*

- A. No
- B. Once
- C. 2 or 3 times
- D. 4 or 5 times
- E. 6 or 7 times
- F. 8 or 9 times
- G. 10 to 15 times
- H. 16 times or more

DOCTOR SAID YOU HAD LIVER PROBLEMS?

	<u>Centers</u>	<u>Services</u>	<u>Drydocks</u>	<u>Chi Square</u>	<u>Total N</u>
No	91.6	93.0	96.5	18.32	2,191

≥ Once

8.4 7.0 3.5

df = 2, p < .001

SAW A DOCTOR, PSYCHOLOGIST, SOCIAL WORKER, OR COUNSELOR TO HELP YOU STOP DRINKING?

	<u>Centers</u>	<u>Services</u>	<u>Drydocks</u>	<u>Chi Square</u>	<u>Total N</u>
No	49.6	49.0	61.0		
Once	27.5	32.5	26.7		
2 or 3 times	15.5	11.7	8.1		
≥ 4 times	7.5	6.8	4.2		

UNTIL YOUR 25TH BIRTHDAY (OR PRESENT IF YOU ARE NOT YET 25, WHEN YOU GOT DRUNK, HOW BAD WAS YOUR HANGOVER?)

28.51 2,189

	<u>Centers</u>	<u>Services</u>	<u>Drydocks</u>	<u>Chi Square</u>	<u>Total N</u>
A. Terrible - The worst you could imagine	19.6	22.6	16.0		
B. Pretty bad - A little worse than average	22.0	28.8	24.7		
C. Average (for most people)	20.6	17.5	21.8		
D. Present but less than average - Not bad	27.1	25.3	28.5		
E. Have never had a hangover	10.8	5.8	9.0		

OVER THE PAST THREE YEARS, WHEN YOU GOT DRUNK, HOW BAD WAS YOUR HANGOVER?

24.68 2,191

	<u>Centers</u>	<u>Services</u>	<u>Drydocks</u>	<u>Chi Square</u>	<u>Total N</u>
A. Terrible - The worst you could imagine	18.1	21.8	15.0		
B. Pretty bad - A little worse than average	24.0	29.1	25.1		
C. Average (for most people)	19.9	17.8	21.8		
D. Present but less than average - Not bad	27.5	25.1	29.2		
E. Have never had a hangover	10.5	6.3	8.9		

WHEN DRINKING OVER THE LAST YEAR, HOW MANY DRINKS DID YOU USUALLY HAVE IN 24 HOURS? (1 drink = 1 beer or 1 glass of wine, 1 single mixed drink, or 1 shot) (If you are not sure, try to guess as closely as possible)

8.47 2,166

	<u>Centers</u>	<u>Services</u>	<u>Drydocks</u>	<u>Chi Square</u>	<u>Total N</u>
A. None to Five	16.3	16.8	21.4		
B. Six or more	83.7	83.2	78.6		

WHAT TYPE OF ALCOHOL DO YOU DRINK MOST OFTEN?

6.05 2,189

	<u>Centers</u>	<u>Services</u>	<u>Drydocks</u>	<u>Chi Square</u>	<u>Total N</u>
A. Beer and Wine	71.5	65.9	71.1		
B. Hard Liquor (Bourbon, Scotch, Vodka, etc.)	28.5	34.1	28.9		

HOW MANY TIMES IN YOUR LIFE HAVE YOU BEEN EXTREMELY SEASICK?

16.24 2,191

	<u>Centers</u>	<u>Services</u>	<u>Drydocks</u>	<u>Chi Square</u>	<u>Total N</u>
A. Never	77.0	71.1	79.7		
B. Once	13.5	16.3	10.8		
C. 2 or more times	9.5	12.6	9.5		

WHEN YOU ARE ILL, AS WITH A COLD OR THE FLU, IS YOUR STOMACH USUALLY UPSET?

19.51 2,187

	<u>Centers</u>	<u>Services</u>	<u>Drydocks</u>	<u>Chi Square</u>	<u>Total N</u>
A. Almost always	13.9	15.3	13.5		
B. Usually	16.8	20.0	14.4		
C. Sometimes	34.3	38.4	40.5		
D. Never or almost never	35.0	26.3	31.6		

	<u>Centers</u>	<u>Services</u>	<u>Drydocks</u>	<u>Chi Square</u>	<u>Total N</u>
WHAT WAS YOUR FATHER'S ATTITUDE TOWARD ALCOHOL?				26.14	1,790
A. Opposed to use of alcohol by anyone	8.0	3.4	6.9	df = 10, p < .01	
B. Abstainer, but not opposed to others drinking	12.6	12.9	13.0		
C. Light to moderate drinker	29.0	38.1	38.1		
D. Heavy drinker	26.9	22.6	21.6		
E. Alcoholic or chemically dependent	15.4	16.9	14.1		
F. Not applicable	8.0	6.1	6.3		
DID YOU EVER GET INTO TROUBLE IN SCHOOL DUE TO ALCOHOL?				17.47	1,781
A. Yes	34.4	36.2	26.0	df = 2, p < .001	
B. No	65.6	63.8	74.0		
DO YOU WANT TO SEE A PSYCHIATRIST?				9.43	1,745
A. Yes	14.7	18.8	21.4	df = 2, p < .01	
B. No	85.3	81.2	78.6		
WHAT WERE YOUR ARRIVAL ORDERS?				440.21	1,775
A. PCS	5.6	10.4	20.8	df = 8, p < .001,	
B. TAD	35.8	59.4	60.4	expected frequency	
C. TEMDU	55.8	19.8	7.2	< 5	
D. ASMRO	.7	.9	.4		
E. Other	2.1	9.6	11.2		
WHAT WAS THE IMPORTANCE OF RELIGION IN YOUR CHILDHOOD?				16.95	1,786
A. Very important	12.3	15.2	12.9	df = 8, p < .05	
B. Important	22.9	16.7	19.1		
C. Moderate	36.7	37.4	37.8		
D. Unimportant	16.5	22.8	21.1		
E. None	11.6	7.8	9.1		
WHO REFERRED YOU TO THE CLINIC?				51.59	1,779
A. CO	20.3	13.6	12.9	df = 16, p < .001	
B. XO	7.4	5.1	8.4		
C. Division Officer	6.2	8.0	9.2		
D. Medical Officer	17.1	18.9	12.1		
E. Chaplain	3.0	1.3	1.4		
F. Ex-patient	3.7	4.5	4.9		
G. Self	25.1	29.9	32.8		
H. Clinic Counselor	8.7	7.2	6.1		
I. Other	8.5	11.5	12.4		
ALCOHOLIC BY BEHAVIORAL CRITERIA				58.22	2,181
0	38.3	46.5	56.4	df = 6, p < .001	
1	36.4	33.6	29.1		
2-3	23.6	18.0	13.7		
4-6	1.8	2.0	.9		
FAMILY ALCOHOL HISTORY				9.63	2,169
0	51.5	47.7	54.3	df = 4, p < .05	
1-3	23.6	27.2	25.4		
4-60	24.9	25.1	20.3		
EARLIEST AGE FOR ALCOHOL PROBLEMS				56.67	2,187
0	53.8	62.4	71.3	df = 12, p < .001,	
1	6.0	6.8	4.4	expected frequency	
2	16.9	12.8	9.8	< 5	
3	12.0	9.5	7.8		
4	7.5	4.7	4.4		
5	3.6	3.5	2.3		
6	.3	.2	.1		
7	0	0	0		
SUCCESS/FAIL				14.22	2,142
Success	53.9	58.1	63.3	df = 2, p < .001	
Fail	46.1	41.9	36.7		

	<u>Centers</u>	<u>Services</u>	<u>Drydocks</u>	<u>Chi Square</u>	<u>Total</u>
WHAT IS THE PATIENT'S DISCHARGE PROGNOSIS?				33.34	1,490
A. Excellent	5.4	4.8	5.6		
B. Good	36.1	26.3	42.2	df = 6, p < .001	
C. Fair	40.1	42.3	32.6		
D. Poor	18.5	26.6	19.6		
HOW OFTEN DID THE PATIENT DRINK IN CLINIC?				40.23	1,503
A. Never	73.4	86.5	69.6		
B. 1 or more times	26.6	13.5	30.4	df = 2, p < .001	

Biographical Questionnaire Variables that Discriminated
among Older Men Treated in
Alcohol Centers, Services, and Drydocks

	<u>Centers</u>	<u>Services</u>	<u>Drydock</u>	<u>Chi Square</u>	Total <u>N</u>
PRESENT AGE				28.91	2,541
26-29	26.8	33.5	33.6	df = 10, p < .01	
30-34	36.9	35.2	40.2	expected frequency	
35-39	28.0	24.0	20.3	< 5	
40-44	6.0	5.6	4.7		
45-49	1.9	1.8	1.2		
50-61	0.4	0.4	0		
WHAT DO YOU CONSIDER TO BE YOUR ETHNIC ORIGIN?				17.09	2,652
A. Mexican-American	3.8	3.7	3.0	df = 8, p < .05	
B. Oriental	.9	1.0	1.6		
C. Other Caucasian (White)	82.5	84.7	85.7		
D. Negro (Black)	9.8	6.3	6.0		
E. American Indian	3.1	4.3	3.7		
HOW MANY YEARS HAVE YOU BEEN ON ACTIVE DUTY? ACTUAL YEARS.				46.83	2,666
A. 2 years or less	4.3	4.7	4.2	df = 18, p < .001	
B. 3 to 4 years	4.9	5.5	4.6		
C. 5 to 6 years	8.0	9.9	10.4		
D. 7 to 8 years	7.8	10.9	11.1		
E. 9 to 10 years	9.2	10.1	10.6		
F. 11 to 12 years	12.2	12.3	13.8		
G. 13 to 14 years	12.8	8.2	14.0		
H. 15 to 16 years	15.6	12.8	13.8		
I. 17 to 18 years	16.8	14.9	11.1		
J. 19 to 20 years	8.6	10.6	6.3		
WHAT IS YOUR PRESENT PAY GRADE?				25.43	2,610
A. E-1	.6	.9	.4	df = 12, p < .05	
B. E-2	2.9	1.7	1.0		
C. E-3	8.8	10.6	8.1		
D. E-4	11.6	12.0	10.2		
E. E-5	24.7	23.0	27.4		
F. E-6	34.1	34.4	39.2		
G. E-7, E-8, E-9	17.3	17.4	13.7		
HAVE YOU EVER BEEN REDUCED IN RANK OR PAY GRADE?				17.04	2,661
A. No	63.9	68.0	71.6	df = 4, p < .01	
B. Yes, only once	20.5	19.1	18.5		
C. Yes, 2 or more times	15.6	12.9	9.9		
TO WHAT COMMAND WERE YOU ATTACHED WHEN YOU WERE ADMITTED TO THE ALCOHOL PROGRAM THIS TIME?				36.61	2,650
A. Ship	48.9	50.8	37.6	df = 4, p < .001	
B. Shore	38.7	39.2	51.1		
C. Squadron	12.5	10.0	11.3		
HOW MANY YEARS OF REGULAR SCHOOLING, INCLUDING TRADE SCHOOLS, DID YOU COMPLETE <u>BEFORE ENTERING THE SERVICE?</u>				12.42	2,663
A. 11 years or less	47.7	41.4	42.0	df = 4, p < .05	
B. 12 years or High School Graduate	41.5	43.9	45.2		
C. Some college - college graduate	10.8	14.7	12.8		
IF YOU DID NOT GRADUATE FROM HIGH SCHOOL, DID YOU PASS A HIGH SCHOOL EQUIVALENCY TEST?				10.16	2,647
A. Yes	39.3	36.4	37.0	df = 4, p < .05	
B. No	13.9	11.4	10.6		
C. Not applicable	46.8	52.3	52.5		
HOW MANY TIMES DURING THE PAST YEAR WERE YOU <u>ON THE</u> <u>SICK LIST OR HOSPITALIZED?</u>				14.75	2,660
A. None	53.6	56.5	61.4	df = 4, p < .01	
B. One time	30.8	26.9	26.2		
C. Two times or more	15.7	16.6	12.4		

	<u>Centers</u>	<u>Services</u>	<u>Drydocks</u>	<u>Chi Square</u>	<u>Total N</u>
HOW MANY DAYS (TOTAL) WERE YOU ON THE SICK LIST OR HOSPITALIZED DURING THE PAST YEAR?				55.94	2,660
A. No days	52.5	56.3	59.6	df = 16, p < .001	
B. 1 to 2 days	10.8	13.2	15.0		
C. 3 to 5 days	12.3	9.7	10.4		
D. 6 to 10 days	6.3	5.7	6.1		
E. 11 to 15 days	6.5	4.4	2.4		
F. 16 to 25 days	3.7	1.6	1.8		
G. 26 to 35 days	2.4	2.4	1.7		
H. 36 to 45 days	1.6	2.6	0.6		
I. 46 or more days	3.9	4.1	2.5		
SINCE YOU HAVE BEEN IN THE SERVICE, HOW MANY TIMES HAVE YOU:				37.03	2,657
<u>BEEN PUT ON REPORT?</u>					
A. Never	16.5	16.5	18.0	df = 16, p < .01	
B. Once	17.2	21.5	20.6		
C. Twice	17.8	18.2	19.3		
D. 3 times	14.1	11.1	11.2		
E. 4 times	8.9	9.7	11.9		
F. 5 times	6.3	6.6	5.1		
G. 6 times	4.4	5.4	3.2		
H. 7 times	1.9	1.3	2.7		
I. 8 times	13.0	9.7	8.1		
<u>HAD A CAPTAIN'S MAST?</u>				36.26	2,662
A. Never	24.3	27.5	30.2	df = 6, p < .001	
B. Once	20.4	26.0	27.6		
C. 2 to 3 times	32.8	27.3	25.6		
D. 4 times or more	22.6	19.2	16.7		
HOW MANY MOVING TRAFFIC VIOLATIONS HAVE YOU HAD DURING THE <u>PAST THREE YEARS?</u>				11.08	2,665
A. None	43.8	48.7	42.7	df = 4, p < .05	
B. One or two	38.8	38.2	42.3		
C. Three or more	17.5	13.1	18.1		
DO YOU HAVE AN ADULT POLICE OR ARREST RECORD FOR ANY <u>FELONY</u> COMMITTED SINCE AGE 16?				6.73	2,662
A. None	87.3	91.0	89.6	df = 2, p < .05	
B. One or more times	12.7	9.0	10.4		
WHAT IS THE LONGEST TIME YOU'VE EVER BEEN IN A CIVILIAN JAIL?				15.99	2,665
A. Never	23.4	28.3	28.3	df = 8, p < .05	
B. Less than 24 hours	44.4	43.8	43.7		
C. 1 to 3 days	16.8	14.1	16.3		
D. 4 to 7 days	7.6	5.7	4.6		
E. 8 days or more	8.0	8.1	7.2		
THE MAN WITH WHOM YOU LIVED LONGEST UNTIL AGE OF 16 WAS?				20.48	2,596
A. Real (Biologic) father	79.9	83.3	82.8	df = 8, p < .01	
B. Foster	7.1	3.0	4.5		
C. Step	10.0	9.4	9.2		
D. Adoptive	2.8	3.5	2.8		
E. Other	.2	.7	.7		
THE WOMAN WITH WHOM YOU LIVED THE LONGEST UNTIL AGE OF 16 WAS?				15.99	2,618
A. Real (Biologic) mother	91.6	91.5	92.1	df = 8, p < .05	
B. Foster	4.6	2.3	3.3		
C. Step	2.0	3.0	2.0		
D. Adoptive	1.8	2.6	2.5		
E. Other	.1	.6	.1		

THE FOLLOWING IS A LIST OF PROBLEMS THAT PEOPLE MIGHT HAVE BECAUSE OF THEIR OWN DRINKING:

	Centers	Services	Drydocks	Chi Square	Total N
--	---------	----------	----------	------------	---------

MARITAL SEPARATION OR DIVORCE
LAID OFF FROM WORK OR FIRED
TWO OR MORE DRUNK DRIVING ARRESTS
TWO OR MORE ARRESTS FOR PUBLIC INTOXICATION, DRUNK AND DISORDERLY CONDUCT, ETC.
PHYSICIAN SAID THAT ALCOHOL HAD HARMED THEIR HEALTH

HOW MANY OF YOUR CLOSE RELATIVES (REAL PARENTS, FULL BROTHERS OR FULL SISTERS) HAVE HAD ALL FIVE OF THOSE TYPES OF PROBLEMS?

7.57 2,650

A. No close relatives 86.7 89.6 90.6 df = 2, p < .05
B. 1 or more close relatives 13.3 10.4 9.4

HOW MANY OF YOUR CLOSE RELATIVES (REAL PARENTS, FULL BROTHERS OR FULL SISTERS) HAVE HAD ONLY FOUR OF THOSE TYPES OF PROBLEMS?

10.98 2,648

A. No close relatives 87.0 90.7 91.3 df = 2, p < .01
B. 1 or more close relatives 13.0 9.3 8.7

HOW MANY OF YOUR CLOSE RELATIVES (REAL PARENTS, FULL BROTHERS OR FULL SISTERS) HAVE HAD ONLY TWO OF THOSE TYPES OF PROBLEMS?

7.43 2,643

A. No close relatives 78.2 82.6 82.3 df = 2, p < .05
B. 1 or more close relatives 21.8 17.4 17.7

HAS YOUR PRESENT WIFE OR HUSBAND HAD A DRINKING PROBLEM?

8.43 1,901

A. Yes 13.9 8.5 11.8 df = 2, p < .05
B. No - Have no wife 86.1 91.5 88.2

HAVE ANY OF YOUR PREVIOUS WIVES OR HUSBANDS HAD A DRINKING PROBLEM?

7.60 1,390

A. Yes 18.6 16.0 12.2 df = 2, p < .05
B. No - Had no previous wives 81.4 84.0 87.8

USING THE APPROPRIATE NUMBER BELOW, PLEASE ANSWER THE FOLLOWING QUESTIONS.

- A. Never
- B. 17 or younger
- C. 18 to 19
- D. 20 to 21
- E. 22 to 23
- F. 24 to 25
- G. 26 to 27
- H. 28 or over

MISSED TIME ON THE JOB BECAUSE OF DRINKING

28.01 2,654

Never	31.4	27.7	35.5	df = 14, p < .05
17 or younger	7.8	5.3	4.7	
18 to 19	9.9	13.0	12.8	
20 to 21	8.2	10.0	7.3	
22 to 23	10.6	11.4	9.8	
24 to 25	9.3	9.3	8.3	
26 to 27	5.1	6.3	5.8	
28 or over	17.8	17.1	15.8	

WERE DEMOTED BECAUSE OF DRINKING

40.25 2,656

Never	71.9	77.3	79.6	df = 14, p < .001
17 or younger	.8	.1	.6	
18 to 19	2.6	3.4	3.2	
20 to 21	2.9	4.0	3.2	
22 to 23	4.2	3.4	2.8	
24 to 25	3.3	3.3	3.2	
26 to 27	4.9	2.3	2.2	
28 or over	9.5	6.2	5.1	

USING THE APPROPRIATE NUMBER BELOW, PLEASE ANSWER
THE FOLLOWING QUESTIONS.

- A. Never
- B. 17 or younger
- C. 18 to 19
- D. 20 to 21
- E. 22 to 23
- F. 24 to 25
- G. 26 to 27
- H. 28 or over

WENT AWOL BECAUSE OF DRINKING

	Centers	Services	Drydocks	Chi Square	Total N
--	---------	----------	----------	------------	---------

Never	62.5	62.3	72.2		
17 or younger	.5	.6	.2	df = 14, p < .01	
18 to 19	4.4	3.3	2.8	expected frequency	
20 to 21	4.2	3.2	4.3	< 5	
22 to 23	4.1	4.9	2.8		
24 to 25	5.1	5.4	3.8		
26 to 27	5.2	6.2	4.3		
28 or over	13.9	14.2	9.4		

HAD TO GO INTO HOSPITAL BECAUSE OF DRINKING

231.99 2,651

Never	62.5	47.4	82.6		
17 or younger	.4	.6	.4	df = 14, p < .001	
18 to 19	.7	.1	.1	expected frequency	
20 to 21	.9	.6	.4	< 5	
22 to 23	1.6	1.6	.6		
24 to 25	3.2	2.0	1.4		
26 to 27	4.5	9.3	2.6		
28 or over	26.4	38.4	12.0		

A DOCTOR TOLD YOU TO STOP DRINKING

76.51 2,656

Never	62.4	62.6	78.1		
17 or younger	.8	.3	.2	df = 14, p < .001	
18 to 19	.8	.6	.1	expected frequency	
20 to 21	1.7	1.1	1.0	< 5	
22 to 23	1.9	1.7	1.5		
24 to 25	1.9	2.3	2.5		
26 to 27	4.4	5.7	2.8		
28 or over	26.2	25.7	13.7		

THE FIRST TIME YOU STOPPED TRIED TO STOP DRINKING

49.18 2,649

Never	19.5	20.3	27.8		
17 or younger	.6	.6	.6	df = 14, p < .001	
18 to 19	2.1	0	1.1	expected frequency	
20 to 21	2.2	2.2	2.0	< 5	
22 to 23	4.0	6.0	4.5		
24 to 25	8.0	8.6	8.2		
26 to 27	11.6	15.7	10.8		
28 or over	51.9	46.6	45.1		

HOW MANY YEARS DO YOU THINK YOU HAVE HAD A DRINKING PROBLEM?

38.17 2,652

A. Never	7.7	5.6	10.8		
B. 1 year or less	6.6	7.2	9.1	df = 10, p < .001	
C. 1 to 2 years	8.1	8.2	10.9		
D. 3 to 5 years	20.3	23.4	22.1		
E. 6 to 10 years	25.5	27.9	23.9		
F. 11 Years or more	31.8	27.8	23.3		

WHAT IS THE LONGEST PERIOD OF TIME YOU HAVE PARTICIPATED IN ALCOHOLICS ANONYMOUS?

100.20 2,657

A. Never	35.9	48.7	57.1		
B. 1 month or less	33.3	30.6	25.9	df = 6, p < .001	
C. 2 to 3 months	16.6	9.7	8.5		
D. 4 months or more	14.1	11.0	8.5		

	<u>Center</u>	<u>Services</u>	<u>Drydocks</u>	<u>Chi Square</u>	<u>Total N</u>
WHAT IS THE LONGEST PERIOD OF TIME YOU HAVE PARTICIPATED IN ALCOHOLICS ANONYMOUS?				22.48	2,651
A. Never	11.2	11.8	16.5		
B. 1 month or less	27.5	32.5	29.9		
C. 2 to 3 months	29.8	24.6	24.8		
D. 4 months or more	31.6	31.1	28.9		

USING THE APPROPRIATE NUMBER BELOW, PLEASE ANSWER THE FOLLOWING QUESTION.*

- A. No
- B. Once
- C. 2 or 3 times
- D. 4 or 5 times
- E. 6 or 7 times
- F. 8 or 9 times
- G. 10 to 15 times
- H. 16 times or more

HAVE YOU EVER HAD ANY OF THE FOLLOWING PROBLEMS BECAUSE OF ALCOHOL?

SHAKES THE "MORNING AFTER"?				22.64	2,650
Never	33.1	32.4	40.0		
1 to 3 times	17.5	14.4	13.7		
4 to 15 times	17.4	19.9	19.9		
16 times or more	31.9	33.4	26.4		
HALLUCINATIONS?				10.56	2,657
Never	79.5	78.7	84.5		
One or more times	20.5	21.3	15.5		
BLACKOUTS - CAN'T REMEMBER WHAT YOU DID WHILE DRINKING?				27.96	2,642
Never	19.4	14.2	20.5		
Once	6.3	5.8	5.2		
2 or 3 times	15.1	15.5	16.9		
4 or 5 times	12.3	12.4	11.2		
6 or 7 times	6.0	6.8	5.8		
8 or 9 times	4.3	5.2	6.7		
10 to 15 times	6.3	9.9	7.0		
16 times or more	30.3	30.2	26.7		
DOCTOR SAID YOU HAD PANCREATITIS?				14.01	2,646
Never	95.6	96.7	98.6		
One or more times	4.4	3.3	1.4		
DOCTOR SAID YOU HAD LIVER PROBLEMS?				32.53	2,654
Never	85.3	87.5	93.6		
One or more times	14.7	12.5	6.4		
SAW A DOCTOR, PSYCHOLOGIST, SOCIAL WORKER, OR COUNSELOR TO HELP YOU STOP DRINKING?				50.30	2,652
Never	42.6	48.0	55.5		
Once	32.4	33.2	29.2		
2 to 3 times	16.0	14.2	11.3		
4 or more times	9.1	4.6	4.0		
OVER THE PAST THREE YEARS, WHEN YOU GOT DRUNK, HOW BAD WAS YOUR HANGOVER?				19.44	2,657
A. Terrible - The worst you could imagine	24.0	24.5	18.6		
B. Pretty bad - A little worse than average	26.5	28.5	25.0		
C. Average (for most people)	20.1	18.5	24.5		
D. Present but less than average - Not bad	22.7	22.8	25.6		
E. Have never had a hangover	6.7	5.9	6.3		
DO YOU WANT TO SEE A PSYCHIATRIST?				8.19	2,041
A. Yes	11.0	15.4	15.3		
B. No	89.0	84.6	84.7		

*Responses were grouped based on frequency distribution.

	<u>Centers</u>	<u>Services</u>	<u>Drydocks</u>	<u>Chi Square</u>	Total <u>N</u>
WHAT WERE YOUR ARRIVAL ORDERS?					
A. PCS	3.8	8.5	30.4	df = 8, p < .001	
B. TAD	41.2	61.8	58.5		
C. TEMDU	51.0	22.6	4.6		
D. ASMRO	1.7	.8	.3		
E. Other	2.3	6.4	6.2		
WHO WERE YOU BROUGHT UP BY?					
A. Mother and Father	61.4	63.3	65.2	df = 14, p < .05	
B. Mother	16.0	13.1	11.8		
C. Father	2.5	1.1	2.3		
D. Stepmother and Father	2.4	4.3	1.8		
E. Stepfather and Mother	8.6	8.6	8.4		
F. Relatives	4.1	5.4	7.5		
G. Foster Parents	1.6	1.9	1.3		
H. Other	3.3	2.3	1.8		
WHO REFERRED YOU TO THE CLINIC?					
A. CO	13.6	13.4	9.7	df = 16, p < .001	
B. XO	7.0	5.1	8.6		
C. Division Officer	6.3	7.9	11.7		
D. Medical Officer	17.2	16.0	9.1		
E. Chaplain	2.2	1.1	1.8		
F. Ex-patient	3.5	4.1	4.6		
G. Self	35.9	38.4	37.8		
H. Clinic Counselor	6.3	5.7	4.6		
I. Other	8.0	8.3	12.2		
WHAT IS THE PATIENT'S DISCHARGE PROGNOSIS?					
A. Excellent	7.6	7.6	12.6	df = 6, p < .001	
B. Good	50.5	41.2	54.8		
C. Fair	35.0	35.1	23.5		
D. Poor	6.9	16.2	9.2		
HOW OFTEN DID THE PATIENT DRINK IN THE CLINIC?					
A. Never	91.6	91.8	83.6	df = 2, p < .001	
B. One or more times	8.4	8.2	16.4		
ALCOHOLIC BY BEHAVIORAL CRITERIA					
0	31.7	31.2	43.4	df = 6, p < .001	
1	31.2	35.5	31.0		
2-3	33.4	30.6	23.8		
4-6	3.7	2.7	1.7		
FAMILY ALCOHOL HISTORY					
0	48.9	55.0	52.5	df = 4, p < .05	
1-3	24.5	23.7	26.5		
4-60	26.6	21.3	21.0		
EARLIEST AGE FOR ALCOHOL PROBLEMS					
0	45.7	48.3	55.3	df = 14, p < .01	
1	1.7	1.2	1.6		
2	5.7	5.9	4.3		
3	6.2	6.9	6.2		
4	7.0	9.2	5.6		
5	7.1	6.9	7.1		
6	9.2	5.9	5.9		
7	17.4	15.8	14.1		
SUCCESS/FAIL					
Success	86.4	87.4	90.6	df = 2, p < .05	
Fail	13.6	12.6	9.4		

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER 78-48	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) Population Differences and Correlates of Post-Treatment Effectiveness in Alcohol Rehabilitation Facilities		5. TYPE OF REPORT & PERIOD COVERED Interim
7. AUTHOR(s) Douglas Kolb, E. K. Eric Gunderson, and Patricia Coben		6. PERFORMING ORG. REPORT NUMBER
9. PERFORMING ORGANIZATION NAME AND ADDRESS Naval Health Research Center P.O. Box 85122 San Diego, California 92138		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS P.O. #N0002278F088AFZ W.U. #M0096-PN.001-1034
11. CONTROLLING OFFICE NAME AND ADDRESS Naval Medical Research and Development Command Bethesda, Maryland 20014		12. REPORT DATE July 1978
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office) Bureau of Medicine and Surgery Department of the Navy Washington, D.C. 20372		13. NUMBER OF PAGES 27
		15. SECURITY CLASS. (of this report) UNCLASSIFIED
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT (of this Report) Approved for public release; distribution unlimited.		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report) Approved for public release; distribution unlimited.		
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) Alcohol rehabilitation Naval personnel Program evaluation Performance effectiveness Biographical predictors		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Population differences and post-treatment effectiveness rates were compared for 4,908 Navy enlisted men treated in three types of alcohol rehabilitation facilities. Differences in outcome among the types of facilities appeared to reflect characteristics of the populations rather than differences in programs. Men treated in Centers had the most severe histories of disciplinary problems and the least favorable effectiveness rate; those treated in Drydocks had the least severe histories and most favorable outcomes. Post-rehabilitation effec-		

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE(When Data Entered)

tiveness was best predicted by pay grade at the time of admission to rehabilitation. Favorable attitudes toward the service and fewer disciplinary difficulties contributed to the prediction equations as well. Prediction equations for younger and older populations were remarkably stable when applied to prediction of outcome at individual facilities.

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE(When Data Entered)

**DATE
FILMED**

28